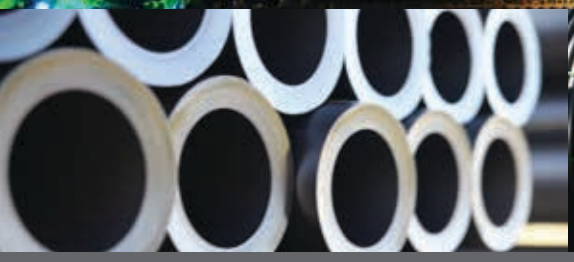
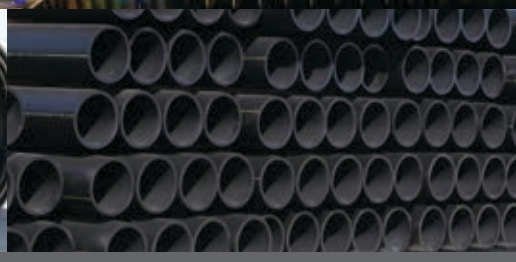
Industrial PE4710

PIPELINE®
PLASTICS

Applications

Pipeline Plastics PE4710 Industrial Pipe is a high performance polyethylene pipe designed for Raw Water, Process Water, Waste Water, Dredging, Slurry, Irrigation, Chemical and Corrosive Applications in rugged and demanding Industrial Applications such as Power Plants, Petrochemical and Mining.





Conformance

- ASTM F714 Standard Specification for Polyethylene (PE) Plastic Pipe (SDR-PR) Based on Outside Diameter
- ASTM D3035 Standard Specification for Polyethylene (PE) Plastic Pipe (DR-PR) Based on Controlled Outside Diameter
- Cell Classification PE445574C per ASTM D3350
- Plastics Pipe Institute (PPI) TR-4 Listing as PE4710 (also meets PE3408 per D3350-02a)
- Hydrostatic Design Basis 1,600 psi @ 73°F (23°C) and 1,000 psi @ 140°F per ASTM D2837
- Color & UV Stabilizer: (C) Black with 2% min Carbon Black per ASTM D3350
- Heat fusion procedure according to ASTM F2620, and PPI TR-33 and TR-41
- Installation is recommended to follow PPI Handbook of Polyethylene Pipe, 2nd Ed.
- Leak testing should be performed according to ASTM F2164, *"Standard Practice for Field Leak Testing of Polyethylene (PE) and Crosslinked Polyethylene (PEX) Pressure Piping Systems Using Hydrostatic Pressure."* Appropriate safety considerations should always be followed.

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Physical Properties	Nominal Value*	Test Method
Density	0.960 g/cm3	ASTM D1505
Melt Index (MI) 190°C/2.16kg	0.07 g/10 min	ASTM D1238
High Load Melt Index (190°C/21.6kg)	7 - 16 g/10 min	ASTM D1238
SCG Resistance (PENT)	500 hours	ASTM F1473
Tensile Stress @ Yield	3,500 psi	ASTM D638
Tensile Stress @ Break	5,000 psi	ASTM D638

Physical Properties	Nominal Value*	Test Method
Elongation @ Break	>500 %	ASTM D638
Flexural Modulus (2% secant)	150,000 psi	ASTM D790
Brittleness Temperature	< -103 °F	ASTM D746
Hardness	62 Shore D	ASTM D2240
Vicat Softening Temperature	256 °F	ASTM D1525
Thermal Expansion Coefficient	1.0 x 10^{-4} in/in/°F	ASTM D696

		DR 7			DR 9			DR 11			DR 13.5			DR 17			DR 21			DR 26			DR 32.5		
Pressure **		335 psi			250 psi			200 psi			160 psi			125 psi			100 psi			80 psi			63 psi		
IPS Size	*Nominal OD (in) **	*Min Wall*	*ID (avg)*	*Wt / Ft*	*Min Wall*	*ID (avg)*	*Wt / Ft*	*Min Wall*	*ID (avg)*	*Wt / Ft*	*Min Wall*	*ID (avg)*	*Wt / Ft*	*Min Wall*	*ID (avg)*	*Wt / Ft*	*Min Wall*	*ID (avg)*	*Wt / Ft*	*Min Wall*	*ID (avg)*	*Wt / Ft*	*Min Wall*	*ID (avg)*	*Wt / Ft*
2"	2.375	0.339	1.656	0.948	0.264	1.816	0.767	0.216	1.917	0.643	0.176	2.002	0.532	0.140	2.079	0.431									
3"	3.500	0.500	2.440	2.058	0.389	2.676	1.663	0.318	2.825	1.394	0.259	2.950	1.160	0.206	3.064	0.935	0.167	3.147	0.769	0.135	3.215	0.628			
4"	4.500	0.643	3.137	3.400	0.500	3.440	2.751	0.409	3.633	2.307	0.333	3.793	1.914	0.265	3.939	1.550	0.214	4.046	1.268	0.173	4.133	1.033	0.138	4.206	0.837
6"	6.625	0.946	4.619	7.373	0.736	5.064	5.961	0.602	5.348	4.994	0.491	5.585	4.151	0.390	5.799	3.354	0.315	5.956	2.747	0.255	6.085	2.243	0.204	6.193	1.810
8"	8.625	1.232	6.013	12.498	0.958	6.593	10.108	0.784	6.963	8.468	0.639	7.271	7.035	0.507	7.549	5.689	0.411	7.754	4.658	0.332	7.922	3.808	0.265	8.062	3.066
10"	10.75	1.536	7.494	19.417	1.194	8.218	15.699	0.977	8.678	13.158	0.796	9.062	10.931	0.632	9.409	8.830	0.512	9.665	7.247	0.413	9.873	5.905	0.331	10.049	4.772
12"	12.75	1.821	8.889	27.315	1.417	9.747	22.089	1.159	10.293	18.513	0.944	10.748	15.377	0.750	11.160	12.427	0.607	11.463	10.193	0.490	11.710	8.315	0.392	11.918	6.709
14"	14.00	2.000	9.760	32.930	1.556	10.702	26.629	1.273	11.302	22.314	1.037	11.801	18.538	0.824	12.254	14.984	0.667	12.587	12.288	0.538	12.858	10.026	0.431	13.087	8.092
16"	16.00	2.286	11.154	43.012	1.778	12.231	34.772	1.455	12.916	29.149	1.185	13.487	24.213	0.941	14.005	19.576	0.762	14.385	16.050	0.615	14.695	13.084	0.492	14.956	10.564
18"	18.00	2.571	12.549	54.440	2.000	13.760	44.017	1.636	14.531	36.897	1.333	15.173	30.644	1.059	15.755	24.760	0.857	16.183	20.313	0.692	16.532	16.570	0.554	16.826	13.364
20"	20.00	2.857	13.943	67.211	2.222	15.289	54.351	1.818	16.145	45.535	1.481	16.859	37.832	1.176	17.506	30.575	0.952	17.981	25.077	0.769	18.369	20.443	0.615	18.695	16.494
22"	22.00	3.143	15.337	81.308	2.444	16.818	65.752	2.000	17.760	55.105	1.630	18.545	45.777	1.294	19.256	37.004	1.048	19.779	30.318	0.846	20.206	24.750	0.677	20.565	19.979
24"	24.00	3.429	16.731	96.767	2.667	18.347	78.261	2.182	19.375	65.586	1.778	20.231	54.478	1.412	21.007	44.018	1.143	21.577	36.083	0.923	22.043	29.439	0.738	22.434	23.769

* Nominal values are typical results and are not guaranteed or intended to be used as a product specification or engineering values.

** Pressure ratings are dependent upon temperature, environmental, and/or chemical considerations which may require the use of additional service factors. The listed pressure ratings are based on PE 4710 materials with 1,000 psi HDS in water environment at 73°F. See PPI TR-9, "Recommended Design Factors for Thermoplastic Pipe", and PPI Handbook of PE Pipe, Chapter 6 – Design of PE Piping Systems for additional guidance. Maximum design temperature is 140°F. Federal design requirements will take precedence for regulated piping systems.